

ABSTRACT OF THE DISCLOSURE

A novel module system solution is provided for direct, transparent access to I/O storage devices connected to a host server within a system area network cluster for efficient sharing of resources and databases among all clustered servers. An exemplary driver system comprises a host driver module which may reside on and which may interface to a host operating system, and which establishes service connections with remote data processors on the system area network and provides direct access to the local storage devices while bypassing protocol stacks of the host operating system; an input/output platform (IOP) including a device driver module which may reside on and which may interface the local storage devices for controlling an array of local storage devices; and a local bus which connects and transports messages and data between the host driver module and the input/output platform (IOP). The host driver module may be a software stack which includes a Local Transport for providing an interface to the input/output platform (IOP) on the local bus and communicating with the input/output platform (IOP) across the local bus; a Remote Transport for providing an interface to other nodes of the system area network; and a Connection Manager for providing connection services and coordinating functions responsible for creating a direct call path between the Local Transport and the Remote Transport. The input/output platform (IOP) includes a communication layer which defines an open, standard mechanism for communication between the host driver module and the device driver module. Both the host driver module and the device driver module may constitute a single device that is portable across a plurality of operating systems (OSs) and host network platforms.